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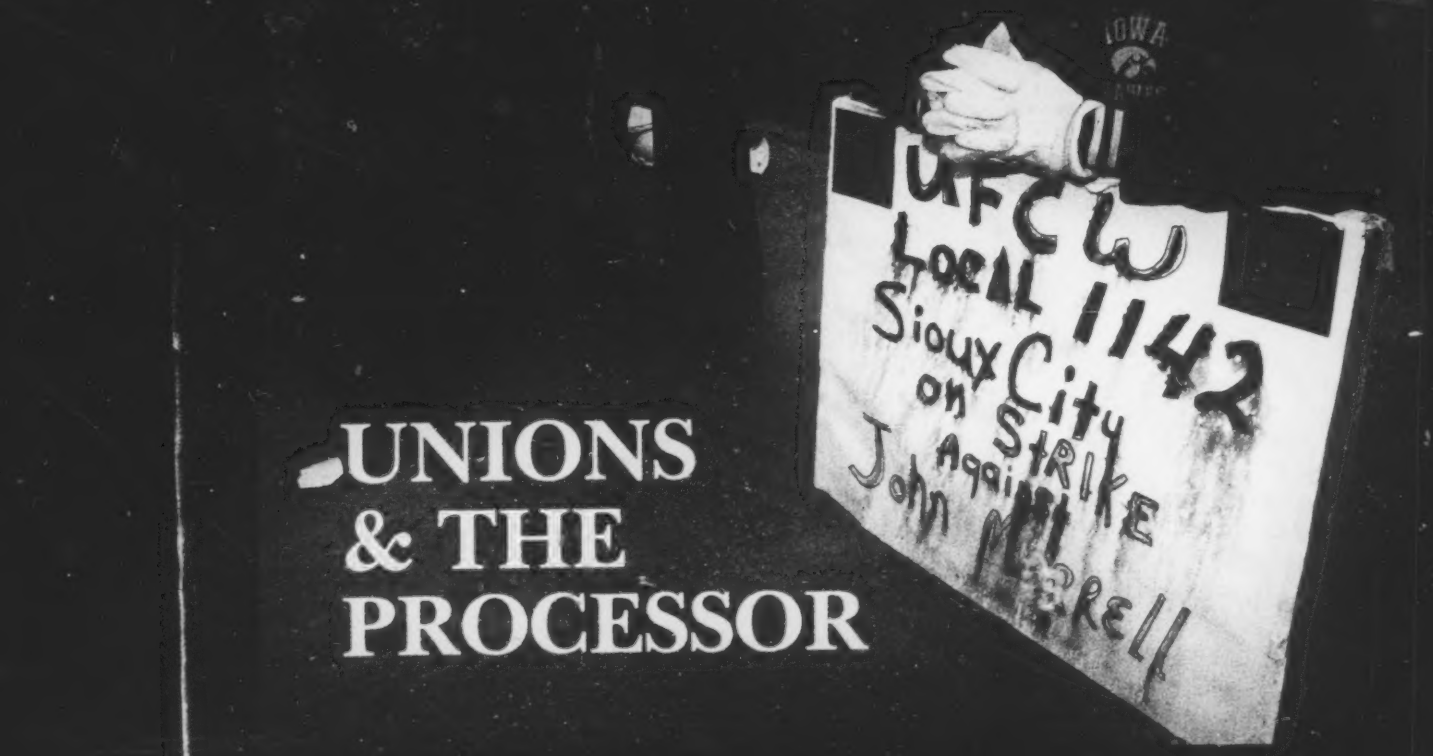

UNIONS & THE PROCESSOR

FOOD ENGINEERING

COVER STORY

Food companies have increased pressure to do a better job of getting return on investments. Reducing labor costs is one way. But unions are fighting back. Cover photo by Dean Curtis.

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This month's Report talks about the shortage of qualified college graduates to fill food and agricultural positions; the guidelines proposed by the FDA giving the food industry greater freedoms in the kinds of health-related messages that can be placed on labels; the Department of Agriculture proposal to limit ingredients that may be listed as flavorings to spices and oils; and former FDA Director Sandy Miller's comments on challenges facing food regulators in the years to come.

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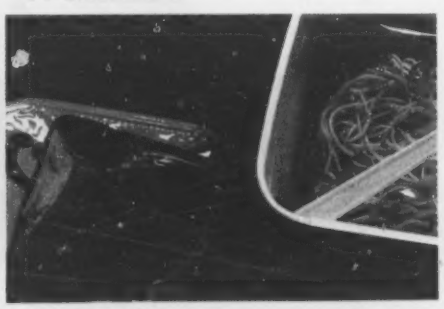

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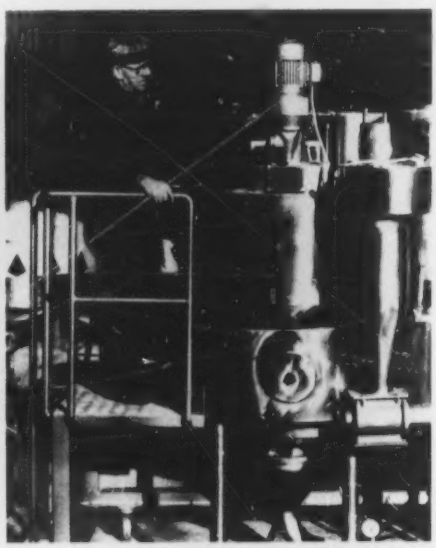

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Special Emphasis

BRIGHT PROMISE, SLOW GROWTH FOR ENZYMES

Technological breakthroughs are dramatic, new and improved enzymes are introduced at a brisk pace – yet the industry plods ahead at a slow rate of growth.

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UNIONS

DEALING WITH UNIONS...

Has the adversarial role between management and labor gone too far in the food industry? Examining some of the recent conflicts can offer insights.

ANN E. PRZYBYLA
Technical Editor

American food companies have been feeling increased pressure to do a better job of getting return on investments. Reducing labor costs is one way. But unions have been fighting back.

At press time, for instance, strikes remained unsettled at John Morrell's Sioux City, IA and Sioux Falls, SD plants. In fact, the meatpacking industry has been plagued with numerous strikes over the past several years and with negative publicity concerning working conditions.

In March of this year, one of the most violent strikes in this country's recent frozen food history ended only when Watsonville Frozen Food Company went bankrupt.

And even though the Teamsters ended a three-week strike against Sara Lee Corp.'s Deefield, MI plant last June, they were not happy. They only backed off because they were in a difficult bargaining position when the Bakery, Confectionery and Tobacco Workers settled and went back to work despite Teamster picket lines.

At the same time that the Teamsters were settling with Sara Lee, the Department of Labor was looking for ways to bring U.S. labor and management together in some reasonable way. In June they issued a first interim report on the matter – *U.S. Labor Law and the Future of Labor-Management Cooperation*.

The purpose of the report was, "to increase awareness of labor-management cooperation; to stimulate debate, discussion and research into potential impediments to cooperation; and to encourage scholars, practitioners and other experts in the field to take a fresh look at our legal structure, with a view to examining its effect on labor-management cooperation."

The need is obviously there since, of the hundreds of responses the Department of Labor received to the report, 83 percent were affirmative and supported the project.

Professor Richard N. Block, Michigan State University School of Labor and Industrial Relations, said, "The interest of the Department in encouraging cooperative labor-management relations is an important step in improving the competitiveness of the United States economy and in effectuating adjustments to the enormous structural economic changes that have occurred in the last decade..."

Bitter strike lasts 18 months

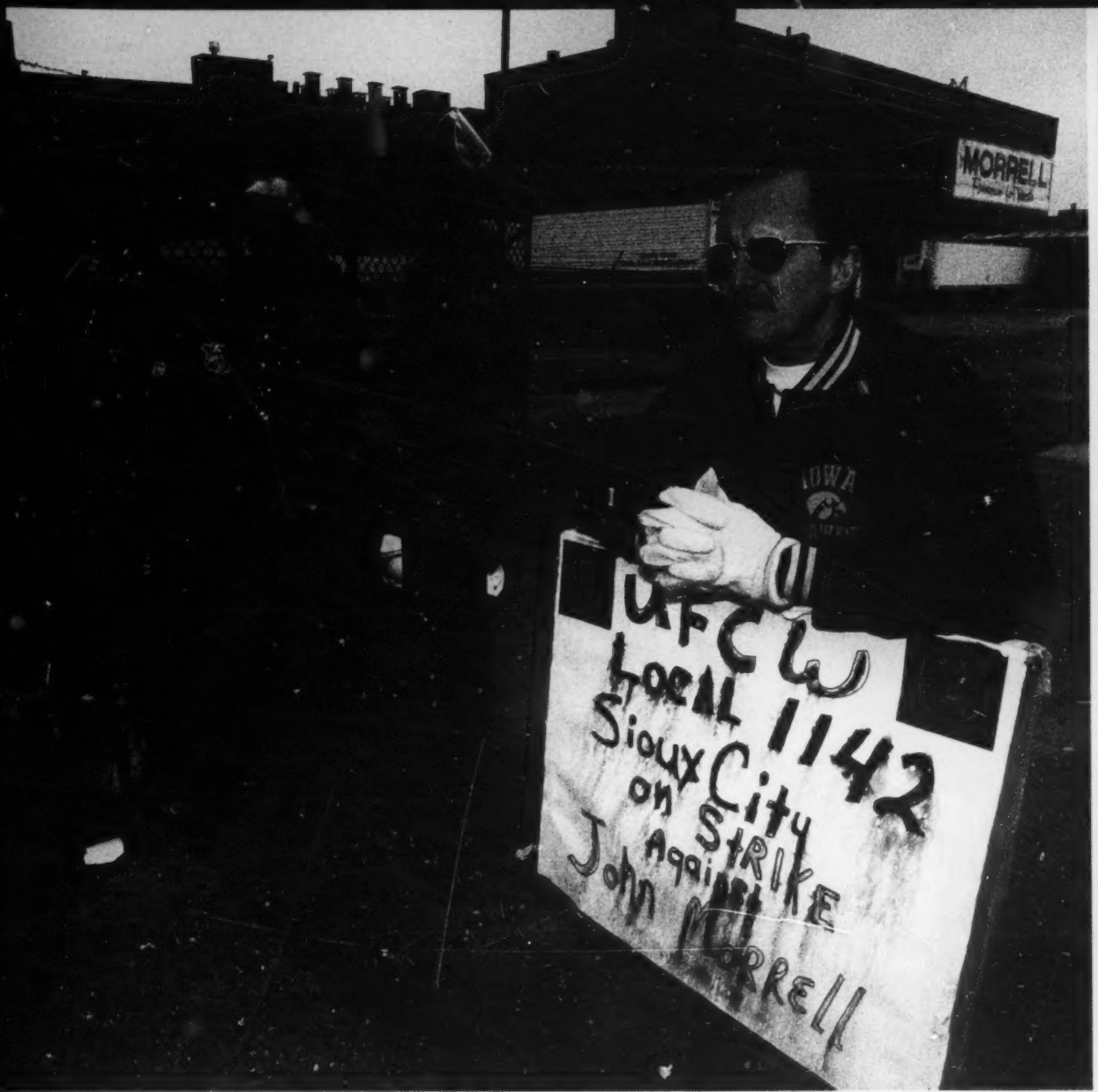
Professor Block's comments may sound a bit abstract, so let's take a case in point – the California frozen food industry. After one bitter 18-month strike, industry and labor are now working together for solutions to increased competition from abroad.

Prior to 1985, most California frozen food processors negotiated for a standard contract with the Teamsters through the California State Frozen Foods Association. In 1985 most plants broke away from the association, which left each processor to negotiate its own contract with the union.

Watsonville Canning & Frozen Food Company had economic problems; so the union agreed to a contract with lower wages than most of the other frozen food companies obtained during 1982 contract discussions.

So far, so good. But, according to Leon Ellis, president of Teamster Local 912, the problems began when Watsonville Canning started to advertise that it could provide product at a lower cost because it paid its workers a lower wage. This was compounded, Ellis claims, by the fact that Watsonville's economic problems were caused by mismanagement – both overproduction and corruption within management. (In fact, two officers in the company were convicted of embezzlement.)

In the 1985 contract discussions, Local 912 accepted a 17 percent pay and benefit cut in negotiating three-year contracts with frozen food processors. But Watsonville, along with another firm, Richard A. Shaw Inc., demanded cuts up to 30 percent. At this point, in September 1985, Local 912 went on strike against both Watsonville and Shaw. Both companies brought in strikebreakers and continued operating.



A strike at the John Morrell meat packing plant in Sioux Falls, SD continues as management and labor dispute wages and other issues. Photographer: Dean Curtis.

After five months, Shaw and the union settled on the same pay cuts and benefits as other processors and workers had agreed to. In addition, a profit sharing plan was set up for workers.

The strike at Watsonville continued and became a bitter confrontation. Stones were thrown at buses bringing in strike breakers from outside the town of Watsonville and local police used clubs and tear gas in dispersing and arresting strikers and their supporters. No residents of Watsonville crossed the picket line. Part of the reason for this, according to Ellis, was local support for the strikers was so strong that any strikebreakers from Watsonville would have been killed.

The strike also received broad Teamster support. National and regional Teamster officials campaigned to discourage growers, financial institutions, and others from dealing with Watsonville Canning. According to one source, the Teamsters put $45 million into supporting the Watsonville strike.

Strike touted as a success

The strike was hailed as a success by labor leaders. One sign of this is that, after 10 months, and during government-supervised balloting that included the strikers' replacements, Local 912 was elected to continue representing the workers. Over 900 of the strikers – most of whom were Hispanic women, many single parents – cast ballots, including some who drove 15 hours from Mexico.

The strike still continued for eight months after the election, at which time the bank

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decided to foreclose on its loans and seize the assets of the company. At this point, in early 1986, Watsonville Canning owed about $7 million to the growers and more than $18 million to Wells Fargo Bank.

The growers came to an agreement with the bank to buy the plant and equipment, and formed Norcal Frozen Foods, Inc. The new company quickly settled with the union. Salaries that had ranged from $6.66 to $12.56 an hour were trimmed to $5.85 to $11.56 an hour, but a profit sharing plan was instituted. A two-tier system was also set up where employees hired after a certain date are paid less than those hired earlier.

One note: The two-tier system is becoming more prevalent as industry tries to reduce costs, but it ends up being a trade-off for both sides—especially labor. Since the two-tier wage system is being implemented in the food industry with current contracts, it's too early to tell the long-term effects. But it seems likely the unions will find dissatisfaction among their members as an increasing number are on the lower pay scale. This will most likely influence future contract negotiations. And the effect will become apparent quicker where turnover is higher.

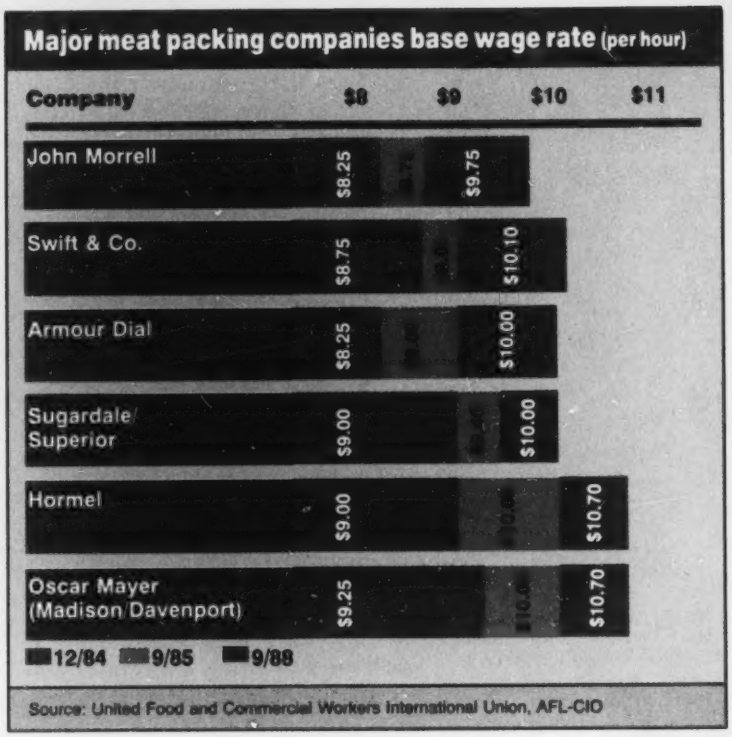
Unions more sensitive?

Accepting wage cuts at Watsonville was not easy, but it was at least at parity with other California contracts. Leon Ellis is especially pleased with the profit sharing plan, because this requires the processors to open their books and allows the union to get an accurate account of the company's finances.

Still, why did the California workers accept pay cuts at all? One answer, in general, is perhaps in the Department of Labor's report: "Further, we believe there is evidence that unions are showing a greater sensitivity to the fact that the well-being of the workers they represent depends upon the financial health of the enterprise."

On a more pragmatic basis, the California Teamsters went to Mexico to look at the competition; and when they came back they had, according to Ellis, made a very simple decision. While the union wanted its "fair share," at the same time, "we don't want to kill the goose that laid the golden egg."

Some background: California is losing market share of frozen vegetables to non-union Texan plants—and plants in Mexico where labor costs can be as low as $3 to $5 a day. In the last eight years, at least three new frozen food processing plants were built in Texas while a number of California processing plants closed. Currently Norcal runs at only 70 percent of capacity.



Late last year, The University of California Cooperative Extension published a study of the frozen vegetable industry in Mexico. It pointed out that in 1985, U.S. imports from all sources equaled 22 percent of the frozen broccoli pack and 39 percent of the frozen cauliflower pack. Of that, Mexico provided 82 percent of the broccoli and 89 percent of the cauliflower.

The report went on to point out that "the rapid decline in the peso's value during 1986 was accompanied by a sharp increase in the annual rate of frozen vegetable imports. The exchange rate is likely to remain low for economic and political reasons and may stimulate a significant expansion of U.S. imports in 1987."

Currently both management and labor at Watsonville and throughout the California frozen food industry are happy with their agreements and are even working together to overcome obstacles facing the frozen food industry.

For example, Richard A. Shaw began a program—T.H.A.N.K.S., Inc.—which has the mission to educate American consumers about farm products produced, packed, and processed in the U.S. and to provide identification of these as such in the marketplace. They use a seal showing a tractor and the words, *100% U.S. Grown T.H.A.N.K.S.*

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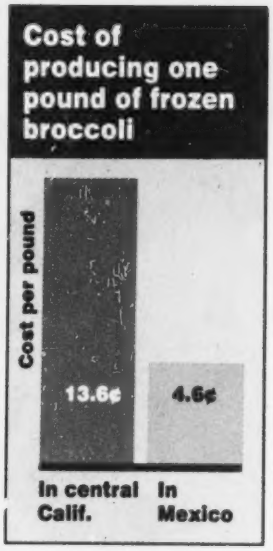

Above: A University of California Cooperative Extension study on the Mexican frozen vegetable industry relates the cost of producing frozen broccoli in Mexico versus in central California. *Right:* Wage patterns within the food industry vary according to geographical location, state of the particular segment of the food industry; and type of contract negotiated. Wage discrepancies between different companies or plants within the same type of processing area are contributing to labor problems.

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Revamping an industry

In another processing area—meat packing—where labor costs are especially high (as much as 50 percent of operating costs), a revamping of the industry beginning in the 1970s—along with changing techniques in production—have caused labor problems which continue today.

The meat packing industry has been the target of a number of strikes during the past several years. (In fact, from 1980 to 1985 there were 158 strikes in this industry.)

A strike at John Morrell is in progress as of this writing. The company has offered a four-year contract to its Sioux City, IA workers with a $1.00 per hour wage cut. But the workers had accepted a $3.22 per hour cut in 1984 and want to regain some of that.

Lewie G. Anderson, international vice president and director, packinghouse division, the United Food & Commercial Workers (UFCW), blames the turmoil on three main issues. First, the meat packing industry is becoming highly concentrated, with fewer and bigger operators. Second, old-time packers who dominated the industry from the turn of the century into the 1970s are leaving the industry. And third, the union's master agreements with the meat packing industry which were in place from 1941 to the mid-1970s are no longer valid.

During the mid-1960s and early 1970s a number of conglomerates took over many of the major meat packers. These include: Greyhound/Armour & Co.; LTV/Wilson Foods; United Brands/John Morrell; General Host/Cudahy Foods; and Swift & Co. evolved into a large holding company known as Esmark. The first move by the conglomerates after acquiring a packing company, according to the UFCW, was to sell off certain of the packer's assets. For example, between 1970 and 1980, Greyhound sold off $237 million worth of Armour's assets. Between 1965 and 1983, conglomerates closed or sold approximately 130 meat packing plants owned by the Big Six master packers.

And there were other problems. Greyhound, for example, voided the union master contract days before selling its Armour packing plants to ConAgra, allowing ConAgra to

Sampling of current food industry/labor contracts

Company	Plant(s) location	Union
Keebler Co. Elmhurst, IL	Atlanta & Macon, GA; Grand Rapids, MI; Denver, CO; Cincinnati, OH; and Van Nuys, CA	Bakery, Confectionery and Tobacco Workers
Sara Lee Corp. Deerfield, IL	Deerfield, MI	Bakery, Confectionery and Tobacco Workers and International Brotherhood of Teamsters
NorCal Frozen Foods, Inc. Watsonville, CA	Watsonville, CA	International Brotherhood of Teamsters
Mexican-based frozen food plants —U.S. owned	Mexico	Nonunion
Tri Valley Growers Modesto, CA	All plants—various CA locations	International Brotherhood of Teamsters
Sun Diamond Growers Stockton, CA	Stockton, CA (walnut plant)	International Brotherhood of Teamsters
Geo. A. Hormel Austin, MN	Austin, MN	United Food and Commercial Workers
IBP, inc. Dakota City, NE	Dakota City, NE	United Food and Commercial Workers

reopen most of the plants with a non-union workforce, points out Anderson. (Workers at ConAgra/Armour's Mason City, IA meat packing plant voted on February 26 of this year for representation by the UFCW union. The UFCW called this organizing win its largest at a major packing house since 1979.)

Last month, ConAgra announced a tentative agreement to settle a National Labor Relations Board (NLRB) case concerning this incident. The charges were filed by the NLRB on behalf of some former Greyhound employees who were not hired by ConAgra. Under the terms of the agreement, which does not establish any violation of the National Labor Relations Act, ConAgra will pay $4.95 million plus interest and taxes, or a total of $6.6 million, to settle the case and avoid further expense and disruption of employees. Earlier ConAgra initiated a voluntary program of offering jobs to former Greyhound/Armour employees which will now be completed under the settlement.

The largest meatpacker today by annual sales is a relatively new company—IBP, Inc. Founded in Denison, IA in 1960, its 1986 sales were $6.8 billion. IBP is credited with developing the boxed beef method of processing, which reduces shipping costs by eliminating shipping of bone and extra fat.

Only three of IBP's 14 operational plants are unionized. The company's Dakota City, NE beef processing plant is a UFCW plant, and the Teamsters organized its Amarillo, TX, and Pasco, WA, plants.

This has made IBP's non-union plants the target of an organizing program led by the UFCW. By making IBP the first target, UFCW president William H. Wynn said that he was "putting the toughest first." Each of the five contract discussions between UFCW and IBP's Dakota City plant during the past 17 years has resulted in a strike. The most recent strike began in March of this year when union members voted unanimously to reject another round of wage cuts. A settlement was reached in July which maintained the wage levels previously in effect for employees hired prior to December 14, 1986 and provides them with at least a 15 cents an hour increase late in the third year of the

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Current Contract Wages	Current contract ends	Strike prior to current contract
$1,000 lump sum payment, 1st year—10.5¢ increase for maintenance workers; 2nd year—60¢ increase for maintenance and 50¢ increase for other workers. After increase: $11.97/hr for general help, $12.60 for mixers and machine operators; and $14.55 for electricians.	Oct. 31, 1988	--
Two year wage freeze of $10.43 to $11.50/hr. New hires $6.75/hr, after one year $7.00/hr.	June 30, 1989	yes
Cut from $6.66 - $12.56 to $5.85 - $11.56. Profit sharing plan instituted.	March, 1990 with wage discussion next year	yes
$3 to $5/day.	----	---
$8.02 to $12.98/hr. (Company asked for wage freeze and 2-tier wage system last June, workers turned it down.)	June 30, 1988	no
Average reduction of 35 percent in wages to $4.25 to $8.00/hr.	June 30, 1988	no
70¢ increase to strikers to $10.70/hr. Replacement workers from $8 to 9/hr to $10.70/hr.	Aug. 1990	yes
Wage freeze. Two tier: $7.90/hr for processing and $8.20/hr for slaughter; new hires 50 to 60¢/hr less.	1990	yes

(Continued from page 79)
contract. It also establishes a lower wage tier for new employees.

In announcing the end of the strike, IBP stated, "We are pleased this unfortunate labor dispute has ended and that our striking employees will be returning to work shortly. Everyone loses when there is labor strife and it is IBP management's sincere hope that there will be a new era of cooperation and labor peace in the Dakota City operation."

The company and union agreed to an optional four-year extension of the contract, which contains wage improvements and continued company retirement contributions. If mutually agreed to at the end of the first four years of the contract, the optional provision would extend the contract until 1995 and trigger the additional improvements.

Meat labor holds firm

While union membership among meat packing workers has dropped since the 1950s, support is growing. Processors need to realize that while, as mentioned earlier, unions may be showing greater sensitivity to the financial health of the processor, there is a limit to what they will give up before fighting back.

The UFCW contends that offering concessions to employers will not save plants. The union points out a number of plants (i.e., John Morrell, Estherville, IA and Memphis, TN; Rath Packing, Waterloo and Columbus Junction, IA; Wilson Foods, Monmouth, IL; and Armour, Nampa, ID) where concessions were granted and the plants still closed. The union also maintains that the wave of concessions in meat packing that took place from 1979 through 1982 was initiated not only by packers in financial trouble but by profitable packers as well. This is why, during 1985/86, the UFCW began the process of recovering lost wages from previous years. The union not only wants higher wages but also the establishment of a firm national wage standard.

The food processing industry has moved further away from negotiating master contracts, which has resulted in a discrepancy of wages between processors—even in similar geographical areas. And these discrepancies are behind many of the labor-management problems within the industry.

"Current wages in the meat packing industry don't follow any pattern, and therefore companies are not competing on their ability to produce efficiently," Lewie Anderson explained to *FE*. "This is very destructive to the industry."

The only overall decrease in average hourly wages for meat packing plant workers occurred in 1983 when wages went to $7.42 from $7.60 in 1982, according to the Bureau of Labor Statistics. This was during a period when the meat packing industry was hit by bankruptcies and plant closings.

It was at this time that Hormel, like others, asked its employees to accept wage cuts so that the company could remain competitive. Workers at eight of Hormel's plants agreed; the Austin, MN plant (Local P-9) employees did not. National leaders of the UFCW condemned Local P-9's action in breaking ranks with the other locals.

By August 1985, 1,400 employees struck Hormel's Austin plant. After a long strike which involved calling in the National Guard, Hormel and the UFCW settled for wage rate.

Conflict always present

"We emphasize that cooperation [between labor and management] in areas of mutual interest does not remove all conflict; indeed, conflict can be creative. The question is whether the overall relationship is driven by adversarial or cooperative considerations," states the U.S. Dept. of Labor's report.

Creative solutions may be needed to negotiate the next contract at Sun Diamond Growers' Stockton, CA walnut plant. While their current contract doesn't expire until June 30, 1988, talks have already begun with Cannery Workers Local 601 (part of the Teamsters) representing the employees.

Local 601's current contract with Sun Diamond included an average 35 percent reduction in wages, with a one-time bonus of $1,000 to $10,000 based on the number of years employees had worked for the company. The wage reductions varied from 15 percent for mechanics and electricians to 45 percent for line workers.

In explaining the need for a wage reduction, Vince Brown of Diamond Walnut said

(Continued on page 84)

Many of the contracts for California canneries are due for renewal on June 30, 1988. With seasonal products—such as tomatoes—a strike can be especially devastating. Photographer: Mark Przybyla.

Average hourly wages for food production workers

Type of food production	SCI code	Preliminary July 1987	1986	1985	1984
Preserved fruits & vegetables	203	$8.49	$8.03	$7.81	$7.64
Canned specialties	2032	$10.28	$9.96	$9.58	$9.12
Canned fruits & vegetables	2033	$8.56	$7.88	$7.75	$7.72
Frozen fruits & vegetables	2037	$7.73	$7.37	$7.25	$7.14
All meat	201	$7.43	$7.31	$7.23	$7.24
Meat packing plants	2011	$8.29	$8.24	$8.10	$8.17
Sausage & other prepared meats	2013	$8.94	$8.75	$8.74	$8.89
Poultry & dressing	2016	$6.14	$5.93	$5.75	$5.54
Bakery	205	$10.00	$9.88	$9.69	$9.37
Breads & cakes	2051	$9.95	$9.80	$9.68	$9.39
Cookies & crackers	2052	$10.13	$10.07	$9.70	$9.34
Beverages	208	$11.92	$11.71	$11.38	$10.90
Malt beverages	2082	$16.62	$16.26	$15.68	$15.10
Bottled & canned	2086	$9.57	$9.12	$8.69	$8.26

Source: Employment & Earnings, U.S. Department of Labor, Bureau of Labor Statistics.

(Continued from page 81)

that the walnut industry was and is having severe economic problems. There is erosion of marketing capability in Europe and other international markets. Also, he pointed out that Diamond's wages were out of line with other walnut packers.

The company also made concessions. Management was reduced during that time from 94 to 65 people. And Diamond opened its books to the union to substantiate its claim of economic hardship.

Still, when the union settled for the current contract without a strike, many union members were upset. Shortly thereafter Local 601 voted in its first new leader in approximately 20 years. Lucio Reyes became secretary-treasurer of the local.

Concerning the Diamond Walnut contract Reyes said, "The old union leader didn't explain to people their rights—the more you educate the members, the better."

The union expects to regain its losses in the next contract, but the company feels its wages are still the highest in the industry and doesn't want to make the same mistake by artificially inflating wages. "This may be a tougher negotiation than the last one," Brown said. "There are now 75 walnut processors in California compared to 54 in 1985—with more people in the business there is more opportunity to undercut prices." Diamond wants to keep the wages where they are. "Although we'll hear demands for excessive wages, we won't be maneuvered. Why flirt with disaster again?" stated Brown. "There may be creative ways we can come to a resolution," he added.

Cannery contracts end next year

Cannery Workers Local 601 also has a number of other cannery contracts coming up for renewal June 30, 1988—at the beginning of canning season. With seasonal products, a strike can be especially devastating. The last strike against California's canneries occurred in 1976. After that strike, both sides agreed that a mediator would be hired if necessary to avoid future strikes.

During the 1970s all the major canneries in California belonged to the California Processors Incorporated (CPI), and the local Teamsters who bargained with the canneries belonged to the Cannery Council. The CPI would negotiate a master contract with the Cannery Council. However in 1985, Tri/Valley Growers (TVG), Modesto, CA, separated from CPI, even though it still settled for the same wage agreement as CPI.

Late last year TVG approached the Cannery Council and asked the union to consider reopening the existing contract before its expiration date on June 30, 1988. The reason for the request was that a number of smaller plants—but with a total combined output greater than that of TVG's—were paying lower wages and TVG was losing market share. Hence, jobs were being lost.

In fact, during 1985-86, Tri/Valley closed three facilities—two fruit and one tomato—due to decreased sales volume. Ed Miller, senior VP, TVG human resources, did point out that the company is not losing money, but lost sales still means lost jobs.

The company's wage proposal, first made to the union last October, asked for two changes in the current labor agreement. "First, TVG proposed to freeze the July 1 pay increases for hourly employees. Second, it recommended that new employees hired after July be paid at lower, more competitive rates—the same rates paid by Sierra Fruit." (Sierra Fruit, Sacramento, CA, is paying new hires $4.75 per hour.)

The Cannery Council's executive board decided not to reopen the existing agreement with Tri/Valley, an agreement which covers 9,000 Tri/Valley workers at 13 plants. The union explained to its members that if Tri/Valley got a lower rate, then the other big canners will demand the same, and then many smaller canneries will probably have to lower their wages even further just to survive. This would result in no real advantage for Tri/Valley, but it would create a down-

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Strikes can lead to acts of violence – the car shown above was turned on its side by strikers at the John Morrell Sioux Falls, SD plant during a strike that was in progress at this writing. Photographer: Dean Curtis.

(Continued from page 84)

ward wage spiral throughout the industry.

However, Lucio Reyes contends that "even if we give concessions, there is no guarantee the company won't close a plant."

A newsletter article from Local 601 to its members (about TVG's proposal) ended by stating, "We have given up a lot in the last six years. Once we decide that we have taken enough cuts, and that we are willing to stick together to defend ourselves, nothing can stop us!"

Recently, a major change in top TVG management was made. The main purpose of the changes was "to enhance the relationship between Tri/Valley's members and its valued employees and to improve the communications and understanding of our common goals by both groups."

Board Chairman Jim Saras assumed the position of Chief Executive Officer in addition to his Board responsibilities. Former CEO Travis Mullinex remained as President and assumed the additional role of Chief Operating Officer.

"Somehow, we've got to make every employee feel they are part of Tri/Valley and that they are important," Saras stated. And he named better employee communications as the number one priority for Tri/Valley in 1987/88 – especially at the plant level.

Get employees involved

Involving employees more in decisions affecting the company has been suggested as a method to improve management/labor relations. According to the U.S. Dept. of Labor's report, "Many in the business community, both unionized and non-union, have shown interest in work force participation and employee involvement as a means of increasing competitiveness and internal efficiency."

A number of food companies have found success by incorporating this idea. Campbell Soup Co., Camden, NJ, has set up more than 500 Quality Circles in its plants – both union and non-union.

David Hackney, of Campbell Soup Company's public relations department, explained that people become frustrated when they feel they have no control over their situation. And while not all suggestions are acted upon, Quality Circles give workers a chance to be heard.

In a U.S. Department of Labor follow-up report to the labor/management cooperation document, a section is devoted to responding to comments. In this section, it states: "We *do* start from the premise that labor/management cooperation is desirable, a view we hope is shared by most knowledgeable persons in the labor relations community. Labor-management cooperation has, in case after case, demonstrated its effectiveness in helping American industry meet the challenges of a changing economy, including intensified international competition; cooperation has demonstrably increased productivity and quality (of products and of worklife). Moreover, it serves human values by giving workers a greater sense of self-worth and pride, and a way to use their talents more effectively. We believe strongly that labor-management cooperation – whether called participative management, employee involvement, union-management committees, QWL or whatever – is essential to the future success of American industry."

Each segment of the food industry needs to find what solutions work best in their situation, and sometimes this may involve creativity. But, when the workers are represented by a union, it is important for the processor to recognize it as the legitimate representative of its members; and remember that while a union may be willing to sacrifice if necessary to save jobs, it can only be expected to do so to a point.

Another important thing to remember is: Be open with your employees – if the company is experiencing financial difficulties, let the workers know from the outset. But expect them to want their fair share when the company returns to profitability. And last, but certainly not least, employees need to feel an important and integral part of the company's success.

As Nick Fidandis, chairman of the Joint Labor/Management Committee of Retail Food Industry and formerly Director of Mediation Service, U.S. Dept. of Labor for 17 years, points out, "A strike is a no-win situation on both sides with wasted energy and misdirection of resources."

PACKAGING BUYERS SURVEY

Reading the charts: The numbers given indicate the percentages of respondents who checked off an individual category. For example, in the chart below, 66.7 percent of our respondents who work in firms with less than 100 employees, said that Corporate Management has major influence on Package Design decisions. On the opposite page, 6.5 percent of respondents involved in the manufacture of Meat Products, purchased domestically-manufactured Aseptic Packaging Equipment. The charts are the result of a survey of 367 managers in the food industry.

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Convenience features

"Convenience with quality" seems to be the rallying cry of processors in response to consumer demands. As shown in the accompanying chart, many processors are considering or have recently activated programs dedicated to improving these features. Almost 50 percent of our respondents are introducing new shelf-stable products (ed. note: As this category includes everything from canned soup to bottled juice to shelf-stable, plastic-packaged entrees, it was expected that this category would draw the greatest response, because shelf-stable products are among the most convenient to use.)

Another 33.8 percent are introducing easy-pour or easy-open features. Wish list responses in this area included:

- "A truly resealable pouch. One that the end user can reseal three or four times without product degradation, yet is economical."
- "A lid material that would reliably seal yet is easily peelable."

The penetration of microwave ovens into American households has reached 70 percent, opening up a whole new market. Almost 32 percent of respondents said they were converting products to dual-ovenable or microwaveable. Several of our respondents voiced the need for improved microwave packaging, for example:

- "Microwave trays that can selectively brown or crisp bakery products, but merely cook vegetables or meats and sauces."
- "A microwave susceptor capable of reaching a desired temperature in a short period of time (45 seconds) in any make or model of microwave oven and capable of staying at that temperature for about five minutes without self-destruction."

About 29 percent of our respondents are considering or have entered the refrigerated, extended shelf life market, with the bulk of these responses coming from the Meat, Dairy and Frozen Fruit/Vegetable/Entrees categories. However, the respondents would like to see "A reliable system to alert consumers to temperature abuse in refrigerated and frozen products."

Equipment boom

The packaging equipment business seems to be booming. All in all, our 367 respondents accounted for 2,035 equipment purchases in the past 12 months. Respondents were asked to check the types of packaging machinery their operations had purchased in the past twelve months, and whether the machinery was of foreign or domestic origin.

The greatest response came in the category of marking, coding and imprinting machines, with 54.8 percent of our respondents indicating purchases. The bulk of this equipment was bought domestically. Labelers followed with 43.3 percent purchases, again with most purchases being domestic.

The next largest group of purchases came in weighers, 38.4 percent in the past year. Almost 35 percent purchased casers; 34.9 percent, cartoners; and 34.9 percent liquid filling equipment. These were followed by inspection/detection devices (27.0 percent), filling controls (26.7 percent), non-palletizing shrink wrappers (21.5 percent) and dry product filling equipment (24.8 percent).

Domestic vs. foreign

The highest ratios of foreign to domestic purchases came in the areas of aseptic filling equipment – 7.9 percent foreign purchases to 5.7 percent domestic – thermoform/fill/seal – 5.2 percent foreign purchases to 4.9 percent domestic, and blow mold/fill/seal equipment – 2.7 percent foreign purchases to 2.2 percent domestic. When asked why they purchased foreign equipment, the most quoted responses were that the equipment was "unavailable from a U.S. manufactur-

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Respondents were asked to name the individuals (by job function) who have major influence on the following:

	Package Design			Materials Purchasing			Equipment Purchasing		
Corporate Management	66.7%	60.5%	46.2%	39.5%	23.8%	19.2%	52.6%	47.6%	41.3%
Production Management	24.6	22.4	18.3	49.1	43.5	31.7	59.6	67.3	78.2
Packaging Design	24.6	35.4	50.6	9.6	13.5	21.2	4.4	6.8	6.7
Packaging Engineers	14.9	31.3	45.2	19.3	28.6	43.3	18.4	38.1	57.7
Other Engineering	7.0	13.6	8.7	7.9	8.2	19.6	24.6	51.0	52.9
Purchasing	13.2	16.3	9.6	52.6	68.7	77.9	16.7	28.6	27.9
Marketing Management	57.0	73.5	85.6	13.2	14.3	13.5	10.5	8.7	4.8
Product Research & Development	31.6	41.5	47.1	36.0	48.1	43.3	23.7	23.8	27.9

☐ Firms with less than 100 employees
☐ Firms with between 100 and 499 employees
☐ Firms with 500 or more employees

Respondents were asked to check the types of machinery their operations had purchased in the past twelve months, and whether they were of domestic or foreign manufacture.

Domestic / Foreign	TOTAL	MEAT PRODUCTS	BAKERY PRODUCTS	DAIRY PRODUCTS	FLAVORS/ FOOD INGREDS.	CANNED FRUIT/VEG. /ENTREES	FATS AND OILS	FROZEN FRUIT/VEG. /ENTREES	CONFEC- TIONERY PRODUCTS	CEREALS/ GRAIN PRODUCTS	BEVERAGES	OTHER FOOD PRODUCTS
Aseptic Packaging Equipment	5.7% 7.9	6.5% 9.3	3.5% 0.6	10.3% 13.8	8.7% 6.5	10.9% 14.1	2.0% 10.0	10.5% 15.8	3.4% 3.8	5.0% 12.5	11.6% 16.8	4.0% 8.0
Bag-In-Box	13.9 3.3	12.0 3.7	18.8 5.9	19.0 4.3	12.0 3.3	28.1 4.7	12.0 2.0	22.8 1.8	12.1 5.2	25.0 8.8	20.0 4.2	11.0 3.0
Blow Molding Equipment (Blow Mold/Fill/Seal)	2.2 2.7	1.9 4.6	1.2 5.9	3.4 3.4	3.3 3.3	4.7 3.1	2.0 2.0	3.5 7.0	3.4 5.2	1.3 5.0	3.2 3.2	2.0 3.0
Cartoners	33.0 5.7	40.7 6.5	37.6 7.1	38.8 8.6	28.3 5.4	39.1 7.8	24.0 6.0	43.9 8.8	48.3 13.8	45.0 8.8	35.8 10.5	33.0 5.0
Casers	34.1 5.4	29.6 8.3	38.8 5.9	39.7 5.2	30.4 4.3	43.8 12.5	34.0 6.0	36.8 7.0	41.4 5.2	46.3 7.5	41.1 7.4	33.0 7.0
Closure Handling, Application	18.0 4.1	17.6 6.5	12.9 9.4	16.4 3.4	19.6 4.3	23.4 7.8	14.0 4.0	19.3 10.5	20.7 5.2	16.3 3.8	22.1 9.5	25.0 3.0
Filling Controls	22.9 6.3	19.4 8.3	18.8 9.1	31.0 10.3	30.4 7.6	31.3 10.9	28.0 6.0	22.8 8.8	27.6 12.1	32.5 8.8	29.5 9.5	26.0 6.0
Filling Equipment (Liquids)	28.1 9.5	25.0 11.1	25.9 9.4	38.8 12.1	32.6 7.6	45.3 18.8	44.0 8.0	40.4 15.8	36.2 6.9	27.5 15.0	43.2 16.8	32.0 11.0
Filling Equipment (Dry Products)	21.5 6.8	22.2 9.3	24.7 8.2	26.7 8.6	27.2 9.8	29.7 6.3	18.0 6.0	28.1 5.3	27.6 10.3	37.5 11.3	23.2 8.4	31.0 12.0
Gas Flush Systems	12.5 4.6	20.4 11.1	18.8 2.4	16.4 7.8	12.0 5.4	21.9 3.1	10.0 2.0	17.5 8.8	13.8 3.4	16.3 6.3	18.9 2.1	14.0 2.0
Horizontal Form/Fill/Seal	15.0 7.6	21.3 12.0	24.7 8.2	19.0 14.7	14.1 6.5	26.6 9.4	12.0 10.0	29.8 14.0	20.7 19.0	28.8 8.8	16.8 10.5	14.0 8.0
Inspection/Detection Devices	24.5 5.2	26.9 4.6	24.7 5.9	27.6 6.0	26.1 9.8	31.3 6.3	18.0 12.0	33.3 3.5	25.9 10.3	38.8 11.3	33.7 9.5	27.0 6.0
Labelers	36.8 9.3	39.8 13.0	38.8 8.2	39.7 9.5	39.1 6.5	35.9 21.9	44.0 12.0	35.1 14.0	37.9 15.5	37.5 11.3	28.4 22.1	33.0 12.0
Markers, Coders, Imprinters	52.0 5.4	51.9 9.3	54.1 5.9	54.3 6.0	42.4 5.4	60.9 10.9	46.0 10.0	57.9 8.8	60.3 8.6	58.7 3.8	53.7 8.4	51.0 3.0
Shrink Wrappers (Non-Palletizing)	19.9 3.3	25.9 4.6	22.4 3.5	23.3 3.4	16.3 0.0	26.6 3.1	24.0 4.0	33.3 5.3	32.8 3.4	22.5 3.8	22.1 6.3	25.0 3.0
Shrink Wrappers (Palletizing)	13.6 1.6	14.8 2.8	12.9 2.4	21.6 1.7	21.7 3.3	23.4 0.0	14.0 2.0	17.5 1.8	20.7 1.7	22.5 6.3	15.8 3.2	13.0 1.0
Stretch Wrappers (Non-Palletizing)	13.1 0.8	15.7 0.9	7.1 1.2	15.5 0.9	15.2 1.1	20.3 1.6	8.0 2.0	19.3 1.8	12.1 1.7	12.5 0.0	8.4 0.0	17.0 2.0
Stretch Wrappers (Palletizing)	18.5 1.4	20.4 3.7	20.0 2.4	19.0 1.7	17.4 3.3	29.7 3.1	12.0 4.0	17.5 3.5	17.2 3.4	31.3 2.5	24.2 1.1	17.0 3.0
Thermoform/Fill/Seal	4.9 5.2	5.6 11.1	7.1 5.9	6.9 6.0	2.2 5.4	9.4 9.4	4.0 8.0	7.0 10.5	8.6 6.9	10.0 6.3	6.3 2.1	4.0 5.0
Tray Formers	8.2 3.8	12.0 5.6	15.3 3.5	9.5 4.3	4.3 1.1	15.6 10.9	2.0 6.0	14.0 8.8	6.9 6.9	16.3 7.5	11.6 3.2	7.0 6.0
Vertical Form/Fill/Seal	12.5 6.8	10.2 8.3	18.8 8.2	11.2 6.0	15.2 7.6	17.2 7.8	14.0 4.0	8.8 8.8	22.4 8.6	28.8 13.8	10.5 7.4	15.0 5.0
Weighers	35.1 5.7	43.5 7.4	36.5 9.4	41.4 7.8	41.3 4.3	40.6 9.4	38.0 10.0	36.8 10.5	39.7 10.3	48.8 10.0	33.7 6.3	32.0 9.0
Other Packaging Equipment	29.4 13.9	34.3 16.7	31.8 12.9	28.4 17.2	23.9 10.9	31.3 17.2	32.0 20.0	38.6 19.3	29.3 25.9	31.3 18.8	28.4 18.9	35.0 17.0

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Appearing in the chart below are the median scores received in the categories indicated. The lower the score, the more importance placed on the category by our respondents.

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er" (34.7 percent) and that the foreign equipment was of "higher quality" (32.9 percent). Another 22.9 percent said foreign manufacturers were "more innovative."

Who decides?

One of the purposes of this year's survey was to track the packaging decision-making process. We wanted to determine how decisions are made, and who makes them. We found that an overwhelming majority of our respondents (70.3 percent) use the help of packaging and/or equipment suppliers" in making decisions. Another 10.4 percent "use consultants," while 27.8 percent "make all decisions internally." Smaller companies (less than 100 employees) are most likely to employ a consultant (12.3 percent), while the largest companies (500 or more employees) are most likely to make decisions entirely on their own (32.7 percent).

We then broke down the decision-making process in terms of "Package Design," "Materials Purchasing" and "Equipment Purchasing," and asked respondents which individuals by job function have major influence. The results indicate that Marketing Management (71.9 percent) and Corporate Management (58.3) have the most influence in package design, with Product Research & Development (40.3), Packaging Design (36.5) and Packaging Engineering Personnel (30.2), having a major voice. For Materials Purchasing, the Purchasing Department itself has the most influence (66.5 percent), followed by Production Management (42.0), Product Research and Development (39.8) and Packaging Engineers (30.0). In purchasing packaging equipment, the Production Management department (65.9 percent) has the most influence, followed by Corporate

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Respondents ranked several factors in terms of importance when making a packaging decision.

	Total	Production Management	Engineering	Packaging
Initial Cost	3.49	3.57	4.07	3.61
Ease of Maintenance	3.69	3.49	3.81	3.90
Changeover Capability	3.92	3.96	3.77	3.90
Speed/High Volume	3.25	3.74	3.04	3.15
Payback Period	2.94	2.53	2.85	2.83
Reputation of Builder	3.79	3.79	3.53	3.63

Respondents were asked which of the following they have recently done or are considering in response to consumer demands for convenience.

	TOTAL	MEAT PRODUCTS	BAKERY PRODUCTS	DAIRY PRODUCTS	FLAVORS/ FOOD INGREDS.	CANNED FRUIT/VEG. /ENTREES	FATS AND OILS	FROZEN FRUIT/VEG. /ENTREES	CONFEC-TIONERY PRODUCTS	CEREALS/ GRAIN PRODUCTS	BEVERAGES	OTHER FOOD PRODUCTS
Converting or Extending Frozen Product Lines to Refrigerated	15.8%	34.3%	16.5%	17.2%	18.5%	21.9%	14.0%	36.8%	12.1%	13.8%	16.8%	16.0%
Converting or Extending Canned Product Lines to Refrigerated	4.6	8.3	8.2	7.8	4.3	17.2	6.0	10.5	5.2	6.3	7.4	4.0
Introducing New Shelf-Stable Products	49.6	56.5	56.5	51.7	56.5	71.9	54.0	56.1	62.1	67.5	56.8	53.0
Converting Products to Dual-Ovenable or Microwaveable	31.6	59.3	45.9	32.8	31.5	45.3	32.0	64.9	31.0	42.5	24.2	26.0
Introducing Easy-Pour or Easy-Opening Features	33.8	37.0	32.9	32.8	35.9	42.2	44.0	33.3	39.7	47.5	33.7	37.0
Entering the Refrigerated/ Extended Shelf-Life Market	28.9	44.4	27.1	44.0	34.8	31.3	32.0	45.6	22.4	32.5	29.5	28.0

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Management (47.7), Other Engineering (43.3) and Packaging Engineers (37.9).

In the accompanying chart, the results were broken down according to the size of the operation involved. For package design, the role of Corporate Management decreases with the size of the company, while those of Package Designers, Package Engineers and Marketing Management all increase. For Materials Purchasing, the influence of Production Management and Corporate Management decreases with the size of the company, while that of Purchasing and Packaging Engineering increases. For Equipment Purchasing, the role of Production Management, Package Engineering, Other Engineering and Purchasing increases with the size of the company, while that of Corporate Management decreases.

The diversity of these results indicates there is a wide variety of personnel involved in the design and purchase of packaging materials and equipment. All job functions listed have major influence in some packaging decisions. Coupled with research done for the *Packaging Status Report* (*FE* Sept., p.69), the survey results show that packaging decisions are largely a team function.

Food Engineering's exclusive Packaging Buyers Survey results make one thing clear. Food packaging is constantly becoming a more and more complex issue – too complex for any one individual to handle alone. Food processors have become reliant on a team approach for making packaging decisions. New and better packaging materials, machinery and techniques are continuously being introduced and the food industry has geared itself to assimilate them.

Respondents were asked to designate the areas in food packaging that are likely to be of importance over the next five years.

	TOTAL	MEAT PRODUCTS	BAKERY PRODUCTS	DAIRY PRODUCTS	FLAVORS/ FOOD INGREDS.	CANNED FRUIT/VEG. /ENTREES	FATS AND OILS	FROZEN FRUIT/VEG. /ENTREES	CONFEC- TIONERY PRODUCTS	CEREALS/ GRAIN PRODUCTS	BEVERAGES	OTHER FOOD PRODUCTS
Aseptic High-Acid Products	25.6%	25.0%	24.7%	31.9%	37.0%	46.9%	28.0%	42.1%	19.0%	35.0%	42.1%	33.0%
Aseptic Low-Acid/ Particulate Foods	32.7	41.7	38.8	48.3	45.7	54.7	40.0	50.9	37.9	48.8	44.2	33.0
Dual-Ovenable Packaging	32.4	56.5	49.4	39.7	31.5	43.8	34.0	66.7	36.2	46.3	27.4	27.0
Controlled/Modified Atmosphere	44.1	64.8	50.6	50.0	45.7	42.2	52.0	49.1	41.4	43.8	42.1	46.0
Barrier Plastics	59.9	63.9	58.8	60.3	60.9	70.3	60.0	54.4	48.3	63.8	54.7	69.0
Tamper-Evident Packaging	60.8	54.6	52.9	67.2	62.0	64.1	62.0	54.4	70.7	62.5	64.2	63.0
Self-Manufactured Paper Cans	6.8	5.6	8.2	3.4	6.5	7.8	4.0	3.5	5.2	7.5	11.6	12.0
Thermoforming	20.2	29.6	27.1	24.1	15.2	21.9	16.0	24.6	24.1	22.5	15.8	19.0
Developments in Flexible Packaging	45.2	51.9	50.6	48.3	48.9	46.9	40.0	45.6	53.4	62.5	35.8	48.0
Refrigerated/Extended Shelf Life Packaging	44.7	62.0	48.2	66.4	37.0	37.5	48.0	66.7	31.0	41.3	40.0	43.0
Retortable Plastic Packages	22.9	35.2	29.4	24.1	31.5	48.4	20.0	33.3	19.0	40.0	25.3	22.0
New Technology in Metal Containers	17.2	15.7	12.9	19.0	15.2	28.1	18.0	14.0	12.1	18.8	20.0	23.0
New Developments in Glass Packaging	24.3	15.7	9.4	19.8	28.3	34.4	22.0	15.8	15.5	23.8	45.3	31.0